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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,449	02/19/2000	Todd M. Spencer	10991107-1	8243

22879 7590 05/03/2004

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EXAMINER	
DINH, DUNG C	

ART UNIT	PAPER NUMBER
2153	14

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/507,449	SPENCER ET AL.	
	Examiner	Art Unit	
	Dung Dinh	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22,24-27,29-32 and 34-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22,24-27,29-32,34-38,41-47 and 50-53* is/are rejected.

7)☒ Claim(s) *39,40,48 and 49* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *13*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

IDS

The Information Disclosure filed 2/17/04 (paper # 13) was not considered because a copy of the reference cited was not provided.

Response to Arguments

Applicant's arguments filed 2/17/04 have been fully considered but they are not persuasive.

Applicant argued that the Examiner did not provide specific citing to Varma teaching of the "local application sharing logic" and "remote application sharing logic". Claim 22 is a system claim. Varma teaching is more or less a method. Hence, mapping of the claimed structures to the teaching of Varma can only be done by inference to the functions disclosed in Varma. Varma provides for collaboration, sharing of application (workspace) among clients. A client can send/receive modifications to the workspace to/from a collaboration server. Hence the collaboration software routine for sending the modifications from the client to the server would be the 'local application sharing logic' as claimed. The collaboration software routine in the server for receiving the modifications would be the 'remote application sharing logic' as claimed.

Applicant argued that Varma teaches a queue, and that a 'queue' is not the same as a 'buffer'. Applicant cited definition from webepedia in support of this assertion. The argument is not persuasive because the terms 'queue' and 'buffer' are often used interchangeably in the art. It is well known in the art that a 'queue' is a type of 'buffer', specifically a queue is a FIFO buffer. (See generally patent 4473880, 4763243, 5123089 - short excerpts from the patents are attached herein). Furthermore, Applicant's disclosure on the usage of the buffer would seem to indicate that its functions as FIFO - i.e. as a queue rather as a general temporary storage area. (See page 32 lines 12-22). Furthermore, any data structure that temporary hold data for later retrieval would read on 'buffer' as claimed. Since Varma's queue can temporary hold the modification 'events' data and permit the data to be retrieved later (in FIFO order), it is a buffer as claimed.

Applicant argued that Smith and Varma are not combinable. The argument is not persuasive because Smith and Varma are both dealing with the problem of exchanging messages in network; hence they are analogous art. Smith is used to show that is well known in the communication art to ask a receiver if it is ready to receive and to transmit when the receiver is ready.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

Claims 22, 27, 32, 37, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varma US patent 6,336,134 and further in view of Smith et al. US patent 6,282,564.

As set forth in claim 22, Varma discloses a system for ensuring synchronization of multiple applications at remote locations (through the collaboration and partition servers 31 and 32), the system comprising: local application sharing logic configured to receive events to be shared from a plurality of local applications; see col. 5, lines 39-63 (the applications that will be shared are located on the clients), the logic application sharing logic further configured to transmit the events (the applications will send the modifications to the partition or collaboration servers; see col. 7, lines 22-31, col. 8, line 4-col. 10, line 36); remote application sharing logic configured to

receive the events from the local application sharing logic (the remote application sharing logic will receive the modifications that were made at the local client), the remote application sharing logic further configured to transmit the events to a plurality of remote applications, (after collaborating the modification with the other modifications the updated workspace modification will be sent to the remaining clients); and remote event buffering logic configured to buffer the events received by the remote application sharing logic (the FIFO buffer found in the partition server will be an aspect of the buffer) the remote even buffering logic further configured to determine if the remote applications are ready to receive the events (the buffer and the respective servers will determine when a modification is needed, through this determination it is determined when the remote applications are ready to receive events).

Varma expressed the desired to make sure the remote applications received all transmitted events (col.7-10 lines 5-10). However, Varma does not specifically disclose sending an inquiry to the remote applications requesting notification when the remote applications are ready to receive the events, and transmit the events to the remote applications when the remote applications indicate a ready-to-receive status. The processes of inquiry a remote receiver for ready-status prior to transmission

is well known in the data communication art. Smith discloses method for communicating information with step to inquiry whether the receiving device is ready and to begin transmission when the receiving device returns an acknowledgement indicating the receiving device is ready [col.2 lines 6-16, col.19 lines 43-52]. It would have been obvious for one of ordinary skill in the art to inquiry ready status of the remote applications because it would have improved the reliability of the system by ensuring that a remote application would not miss an event because it was not ready to receive.

As set forth in claims 27, Varma discloses a method for ensuring synchronization of multiple applications at remote locations, the method comprising: transmitting events to be shared from a plurality of local applications (through the collaboration and partition servers, 31 and 32); receiving events in a local application sharing logic; transmitting the events from the local application sharing logic; receiving events, transmitted from the local application sharing logic, in a remote application sharing logic see col.5, lines 39-63 (the applications that will be shared are located on the clients); determining if a plurality of remote applications are ready to receive the events (after collaborating the modification with the other modifications the updated workspace modification will be sent to the remaining clients); and

transmitting the events from the remote application sharing logic to the remote applications when the remote applications are ready to receive the events (the buffer and the respective servers will determine when a modification is needed, through this determination it is determined when the remote applications are ready to receive events).

Varma expressed the desired to make sure the remote applications received all transmitted events (col.7-10 lines 5-10). However, Varma does not specifically disclose sending an inquiry to the remote applications requesting notification when the remote applications are ready to receive the events, and transmit the events to the remote applications when the remote applications indicate a ready-to-receive status. The processes of inquiry a remote receiver for ready-status prior to transmission is well known in the data communication art. Smith discloses method for communicating information with step to inquiry whether the receiving device is ready and to begin transmission when the receiving device returns an acknowledgement indicating the receiving device is ready [col.2 lines 6-16, col.19 lines 43-52]. It would have been obvious for one of ordinary skill in the art to inquiry ready status of the remote applications because it would have improved the reliability of the system by ensuring that a

remote application would not miss an event because it was not ready to receive.

As set forth in claims 32, Varma discloses a system for ensuring synchronization of multiple application at remote locations, said system comprising: means for transmitting events to be shared from a plurality of local applications (through the collaboration and partition servers, 31 and 32); means for receiving events in a local application sharing logic; means for transmitting the events from the local application sharing logic; means for receiving events, transmitted from the local application sharing logic, in a remote application sharing logic; see col. 5, lines 39-63 (the applications that will be shared are located on the clients); means for buffering the events received in the remote application sharing logic; means for determining if a plurality of remote applications are ready to receive the events (after collaborating the modification with the other modifications the updated workspace modification will be sent to the remaining clients); and means for transmitting the events from the remote application sharing logic to the remote applications when the remote applications are ready to receive the events (the buffer and the respective servers will determine when a modification is needed, through this determination it is determined when the remote applications are ready to receive events).

Varma expressed the desired to make sure the remote applications received all transmitted events (col.7-10 lines 5-10). However, Varma does not specifically disclose sending an inquiry to the remote applications requesting notification when the remote applications are ready to receive the events, and transmit the events to the remote applications when the remote applications indicate a ready-to-receive status. The processes of inquiry a remote receiver for ready-status prior to transmission is well known in the data communication art. Smith discloses method for communicating information with step to inquiry whether the receiving device is ready and to begin transmission when the receiving device returns an acknowledgement indicating the receiving device is ready [col.2 lines 6-16, col.19 lines 43-52]. It would have been obvious for one of ordinary skill in the art to inquiry ready status of the remote applications because it would have improved the reliability of the system by ensuring that a remote application would not miss an event because it was not ready to receive.

As per claims 37 and 46, Varma as modified by Smith is inherently pacing the rate at which events are shared. Since events are not send to the remote application unit it indicates that it is ready to receive, the rate at which events are shared

to the remote application is effectively 'paced' to the readiness of the remote application. Hence, Varma system as modified has pacing a rate at which events are shared as claimed.

Claims 24-26, 29-31, 34-36, 38 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varma and Smith and further in view of Hales et al. US patent 5,938,723.

Varma discloses a synchronization of clients for enabling the clients to collaborate in workspaces. Varma additionally discloses the usage of a buffer. However, Varma does not disclose having the buffer send information indicating the buffer is full, to suppress input or to indicate the readiness to receive input. As set forth in claims 24, 29, and 34, Hales discloses a system further comprising: means for suspending the transmission of the events from the local applications when the remote application sharing logic indicates that the means for buffering exceeds a threshold; see col. 13, line 60-col. 14, line 4. As set forth in claims 25, 30, and 35 Hales discloses a system wherein the means for suspending the transmission further comprises: means for suppressing input to the local applications when the remote application sharing logic indicates that the means for buffering exceeds the threshold; see col. 13, lines 60-col. 14, line 4. As set forth in claims 26, 31, and 36, 1-tale discloses a system

wherein the means for suspending the transmission further comprises: means for enabling input to the local applications when said remote application sharing logic indicates that the means for buffering is ready to receive the events; see col. 13, line 60-col. 14, line 4. It would have been obvious to a person of ordinary skill in the art at the time this invention was made to have provided the buffer of Varma, with the means for indicating that the buffer is full, to suppress input or to indicate readiness to receive input, as taught by Hales. The rationale is as follows: It would have been desirable to have had the means for providing the system with status information related to the buffer. As Hales teaches the desirability of having means for indicating the buffer is full, to suppress input or to indicate readiness to receive input, one of ordinary skill would have been motivated by Hales teaching to have provided the buffer of Varma with the means for indicating that the buffer is full, to suppress input or to indicate readiness to receive input, thereby having provided system status information for the buffer to permit smooth synchronization of the system through the operation of the buffer.

As per claim 38 and 47, since Varma system as modified by Hales suspends transmission of the events when the buffer is full (i.e. buffer count exceeded a threshold), Varma system as

modified effectively paced the transmission of the event based on the buffering count exceeding a threshold as claimed.

Claims 41-45 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varma and Smith and further in view of Mima et al. US patent 5,654,726.

As per claims 41 and 50, Varma does not disclose sending a message to a user inputting events about the status of another sharing participant in processing the events. In similar field of invention, Mima teaches providing feedback to the user inputting events about the status of another sharing participant (Visually indicating on the sender screen the sender pointer position as seen by the remote receiver taking into account delay time between the participants. See col.2 line 20-27, col.4 line 50-59). It would have been obvious for one of ordinary skill in the art to combine the teaching of Mima with Varma because it would have improved the system by reducing participant mental burden and enabling smooth transmission of information (Mima col.2 lines 20-27).

As per claims 42 and 51, Mima teaches presenting a pacing meter indicator to the user (the relative distance of the sender actual pointer position to confirmed position and the predicted pointer location - see fig.7).

As per claim 43, Mima does not teach using color to indicate delay amount. The delay amount would be reflected in the relative distance between the sender actual pointer position and the confirmed pointer position from the remote receiver. The usage of color would have been a matter of design choice. It would have been obvious for one of ordinary skill in the art to use colors to indicate delay amount because it would have presented a visual cue correspond to the magnitude of the delay.

As per claims 44-45 and 52-53, Mima teaches calculating the delay magnitude (see col.5 lines 32-47) by calculating a delta time between when a throttle event (the sending of the pointer position) was sent and a time that a reply was received (when the ACK packet is received).

Allowable Subject Matter

Claims 39-40 and 48-49 are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other prior art made of record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ohmori et al., "Cooperative Control for Sharing Applications Based on Distributed Multiparty Destop Conference System: MERMAID," Communications, 1992. ICC 92, Conference record, SUPERCOMM/ICC '92, IEEE International Conference on, 14-18 June 1992, Pages:1069-1075 vol.2.

The article discloses an X-window system for collaboration by sharing existing application via an events dispatcher located on each workstation for forwarding events to other workstations.

Mukherjee et al. US patent 6,058,416.

The patent teaches a method for sharing and maintaining consistency in a collaborative system distributing events among shared applications.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action

is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

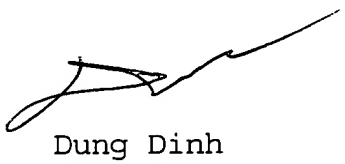
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Dinh whose telephone number is (703) 305-9655. The examiner can normally be reached on Monday-Thursday from 7:00 AM - 4:30 PM. The examiner can also be reached on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached at (703) 305-4792.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this final action should be mailed to:
Box AF
Commissioner of Patents and Trademarks
Washington, DC 20231
or faxed to:
(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA, Fourth Floor (Receptionist).



Dung Dinh
Primary Examiner
April 29, 2004

Enclosure:
Excerpts from patents 5123089, 4753243, and 4473880

US-PAT-NO: 5123089

DOCUMENT-IDENTIFIER: US 5123089 A

TITLE: Apparatus and protocol for local area network

---------- KWIC ---------

Detailed Description Text - DETX (58):
When a sending network node controller attempts to log-on to a receiving network node controller, its ID is either stored as the current sender or, if there is already a sender, its ID is put into a queue of ID's within the receiving network node controller waiting to log-on to it. The queue within the receiving network node controller is a FIFO buffer, with the new ID's being put at the end of the queue.

Current US Original Classification - CCOR (1):
709/237

US-PAT-NO: 4763243

DOCUMENT-IDENTIFIER: US 4763243 A

TITLE: Resilient bus system

---------- KWIC ---------

Detailed Description Text - DETX (49):

Now, central subystem 14, as the receiving unit, (slave) performs the sequence of operations of FIG. 4b. Briefly, the integrity circuits of block 14-10 perform a check of each part of the information received from system bus 2. As seen from FIG. 3b, in the absence of bus parity OK signal BSPAOK010 being forced to a binary ONE, the response circuits of block 14-12 are inhibited from generating a response. As previously discussed, this causes the timeout circuits of block 20 to generate a negative acknowledgement signal. As seen from FIG. 4b, this causes memory subsystem 16 to retry the same transfer of information during a subsequent cycle of operation. If the retry is successful, the central subsystem response circuits of block 14-12 are operative to generate an acknowledgement signal indicating acceptance which completes the memory operation. The acknowledgement signal causes the request to be stored in an input register (e.g. FIFO, buffer, queue).

Current US Original Classification - CCOR (1):

710/107

US-PAT-NO: 4473880

DOCUMENT-IDENTIFIER: US 4473880 A

TITLE: Arbitration means for controlling access to a bus shared by a number of modules

---------- KWIC ---------

Detailed Description Text - DETX (43):

The grant queue (412) is a three-deep FIFO which is used to buffer granted requests waiting for bus time. Unlike the time ordered queue, the grant queue has only one request at the head of the queue in one of the modules at any one time. The request at the head of the grant queue is guaranteed to be the next request to go out onto the bus. After the request has been made, then it is popped off of the grant queue. The purpose of the grant queue is to allow the arbiter to proceed independently of and in parallel with the bus access protocol and to get as much as three grants ahead of the bus. As long as the arbiter can generate grants as fast or faster than the bus can use them, all of the internal delays due to both time ordering and binary arbitration will not introduce delays or dead cycles onto the bus. While the bus is busy with a particular request, the arbiter is able to work in parallel on generating a grant for a request to be put on the bus at a future time. The bus rarely needs to wait for a grant. The bus for handling data, address and control information forms no part of the present invention and therefore is not described herein. Any of many well known buses and bus protocols may be employed, one such bus is described in the above-referenced copending application Ser. No. 336,866, of David Budde et al.

Current US Original Classification - CCOR (1):

710/112